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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/202,035	12/17/1998	JEFFREY JOHN GORMAN	415852000100	2384

25226 7590 01/14/2003

MORRISON & FOERSTER LLP
755 PAGE MILL RD
PALO ALTO, CA 94304-1018

EXAMINER	
LI, BAO Q	

ART UNIT	PAPER NUMBER
1648	35

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/202,035	GORMAN, JEFFREY JOHN	
	Examiner	Art Unit	
	Bao Qun Li	1648	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6,9,11-13,16-18,21,23,25,27-35,37,39,41 and 43-50* is/are pending in the application.

4a) Of the above claim(s) *16-18,21,23,25 and 27-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6, 9, 11-13, 34, 35, 37, 39, 41 and 43-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). *34* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Sequence letter* .

Notice to Comply	Application No.	Applicant(s)	
	Examin r	Art Unit	

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☒ 7. Other: Please insert SEQ ID NO after each disclosed sequences listed on Fig. 2, 11 and 12.

Applicant Must Provide:

☐ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☐ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
PatentIn Software Program Support
Technical Assistance.....703-287-0200
To Purchase PatentIn Software.....703-306-2600

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY

DETAILED ACTION

RCE

A request paper No. 28 filed on Aug. 06, 2002 for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the final rejection is withdrawn. The request for continued examination (RCE) is acceptable and a RCE has been established. An action on the RCE follows.

Sequence requirements

This application contains sequence disclosures **in Figs. 2, 11 and 12** that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Full compliance with the sequence rules is required in response to this Office Action. A complete response to this office action by **inserting corresponding SEQ ID NOs at each end of disclosed sequences listed on Figs. 2, 11 and 12** should include both compliance with the sequence rules and a response to the Office Action set forth below. Failure to fully comply with **both** these requirements in the time period set forth in this office action will be held non-responsive.

Response to Amendment

This is a response to the amendments, paper Nos. 29 and 33, filed 06/23/01. In amendment of paper No. 29, claims 1-5, 7-8, 10, 2, 24, 26, 36, 38, 40 and 42 were canceled, claims 6, 9, 11, 34, 35, 39 and 41 have been amended and new claims 43-50 have been entered. In amendment paper No. 33, claims 43 and 44 have been amended. Claims 6, 9, 11-13, 16-18, 21, 23, 25, 27-35, 37, 39, 41 and 43-50 are pending.

Please note any ground of rejection(s) that has not been repeated is removed. Text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Election/Restriction

1. Applicant's election with traverse of Group I, claims 6, 9, 11-13, 34, 39, 41 and 45-50 in Paper No. 33 is acknowledged. The traversal is on the ground(s) that claim 35 and 37 are not a method claims, but are the dependent claim on claim 6, they should be rejoined with elected group I. Applicant's argument has been fully considered, the claims 35 and 37 are rejoined with group I.

2. Applicant further argue that group V, claims 43 and 44 are also dependent on claim 6 and encompassed within the scope of claim 6. Applicant's argument has been fully considered; claim 43-44 are rejoined with elected group I.

3. Claims 6, 9, 11-13, 34, 35, 37, 39, 41 and 43-50 are considered before the examiner.

4. Applicant is reminded to cancel the claims 16-18, 21, 23, 25, 27-33 drawn to the non-elected groups.

5.

Claim Rejections - 35 USC § 112

6. Claims 6, 9, 11-13, 34, 35, 37, 39, 41 and 43-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 6, 35, 39, 41, 43, 45, 47 and 49-50 are still rejected for its unclearness and indefinite. In response to the Office Action, Applicant amended the claims as " comprising" instead of "consisting essentially of" and asserted that the rejection is moot in view of the amendment.

8. Applicant's amendment has been respectfully considered, however, it is not found persuasive because the word of " comprising" is still an open language, which fails to define what the precise structure of claimed compound. If Applicants wish to claim a particular peptide in the claims, please use more precise language, such as "consisting of" to define what the

claimed molecule is intended in the claims. This affects the dependent claims 9, 11-13, 34, 37, 39, 41, 44 and 48.

New Grounds of Rejections:

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 45-49 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: how to contact cell infected with RSV with intended compound, is it in vitro or in vivo? What kind o dosage is used for the treatment? And how long the treatment is proceeded etc.?

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. The invention of claims 6, 9, 11-13, 34, 35, 37, 39 and 41-44 are directed to non-statutory subject matter. There is no recitation of isolation or synthesis in front of the claimed compound. Therefore, the claimed compound read on naturally occurring materials, which are considered to be non-statutory and non-patenable subject matter within the scope of 35 U.S.C. 101. See Official Gazett, 1077 O.G. April 21, 1987. It is recommended that the claim incorporate the claim language, " isolated or synthesized" to overcome this rejection.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14. Claims 9 and 41 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

15. In the instant disclosure, the applicants have only disclosed synthetic peptides 1-4 as shown in Fig. 12, in which the C-terminal of the amino acids are formed as S-acetaminomethyl derivatives to prevent formation of disulfide bonds. No other compound of peptide wherein one or more amino acids are replaced by its correspond D-amino acids, which possess a inhibitory effect against the CPE induced by RSV. There is not enough information about it in literature either to guide the one of ordinary skill in the art to predict which amino acid should be encompasses the replacement with its corresponding D-amino acid. Therefore, a written description of the other claimed sequences encoding any more than one amino acid are replaced with the corresponding D-amino acids that are able to exhibit the inhibitory effect of RSV infection.

16. See also *University of California v. Eli Lilly and Co.*, 43 USPQ2d 1398 (Fed. Cir. 1997), which teaches that the disclosure of a process for obtaining cDNA from a particular organism and the description of the encoded protein fail to provide an adequate written description of the actual cDNA from that organism which would encode the protein from that organism, despite the disclosure of a cDNA encoding that protein from another organism. 35 USC 112 requires inter alia that "a patent specification contain a written description of the invention and the manner and process of making and using it in such full clear and concise terms as to enable one skilled in the art to make and use the invention". Case law has made it clear that the requirements for a "written description" and an "enabling disclosure" are separate. For example, where a specification contains sufficient information to enable a skilled chemist to produce a particular compound because it gives detailed information on how to produce analogous compounds but it

makes no reference to the compound in question, the "written description" requirement has not been met even though the description may be enabling.

Claim Rejections - 35 USC § 112

17. Claims 6, 9, 11-13, 34, 35, 37, 39, 41 and 43-50 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for having synthetic peptides listed as 1-4 on Figs 12 of G protein of RSV A2 strain and use the peptides bind HEp-2 cell infected with RSV strain A2 and inhibit the cytopathetic effect caused by A2 strain of human RSV infection in vitro, does not reasonably provide enablement for having a method for using the peptide as a therapeutic composition to treat human RSV infection, The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

18. In the instant case, the specification only discloses that segments of the cystein noose-containing nonglycosylated central subdomain encoded by SEQ ID NO: 1 and 39, wherein the amino acid at the C-terminal domain is derived with acetamidomethyl amino acid. The applicants found the cystein noose-containing fragment without regular disulfide bonds is able to exhibit the binding activity and stronger inhibitory effect against the RSV induced cytopathetic effect in the susceptible cells in vitro. However, the scope of the claimed invention read on use any or all derivatives of the fragment of 149-197 for treating RSV infection in any situation.

19. The test of scope of the enablement is whether one skilled in the art could make and use the claimed invention from the disclosures in the application coupled with information known in the art would undue experimentation (See United States v. Theketronic Inc., 8USPQ2d 1217 (fed Cir. 1988). Whether undue experimentation is required is not based upon a single factor but rather a conclusion reached by weighting many factors. Theses factors were outlined in Ex parte Forman, 230 USPQ 546 (Bd. Pat. App. & Inter. 1986) and gain in re Wands, 8USPQ2d 1400 (Fed. Cir. 1988). These factors include the following:

1). Unpredictability of the art.

The mutation of RSV infection is very frequent and unpredictable. This unpredictability is manifested by (1) the nature of the antigenecity of RSV is unpredictable. (2) RSV G protein has a high degree of strain-to-strain diversity and serotype specificity; it means one peptide from

one strain of RSV has very limited application. (3) RSV elicits an imperfect immune response in human is imperfect, that permit repeated infection in the life hood. (4) An enhanced disease in children is suspected to be caused by the vaccinated by RSV vaccine and the result of subunit vaccine made by F plus G protein of RSV is variable and in doubt for its safety etc. Applicants are directed to review the RSV vaccine development addressed by Hall (Science, Vol. 265, 1994, pp. 1393-1394).

2) State of the art.

The treatment of RSV in still undeserved and RSV vaccine at the time of application's invention was uncertain with no demonstrated unambiguous successes in treating or preventing the human RSV infection.

3) Number of working examples.

Applicants presents no working examples to show that any or all polypeptide or the derivatives of the polypeptide comprising the amino acid residues 149-197, in which no disulfide bridges are formed, exhibit the same binding activity to the RSV infected cells or exhibit the inhibitory effect against CPE caused by RSV infection in vitro and in vivo as that of peptide encoded by SEQ ID NO: 1 or 39. The specification does not teach whether all claimed peptide, especially, the polypeptides are able to be used for diagnosis of any or all RSV infection.

4) Amount of guidance presented in the specification.

Applicants present no guidance on how the skilled artisan would practice successfully the claimed polypeptide for treating RSV infection.

5) Scope of the claims.

The claims broad read on a pharmaceutical composition and a method for using the said pharmaceutical composition comprising any or all polypeptide or the derivatives of the polypeptide comprising the amino acid residues 149-197, in which no disulfide bridges are formed, which are all able to treat human RSV infection.

6) Nature of the invention.

The invention involves one of the most complex fields of using peptide in vitro and in vivo.

7) Lever of the skill in the art.

The level of the skill in the peptide vaccine and treatment of RSV is high.

Nevertheless, with regard to an unpredictable field, this does not constitute an adequate disclosure. See Fiers v. Revel (25USPQ2d 1601 at 1606; and also decision by the Federal Circuit with regard to the enablement issues see Genentech Inc. v. Novo Nordisk A/S, 42 USPQ2d 1001-1007). For example, the CAFC stated that "It is the specification, not the knowledge of one skilled in the art that must supply the novel aspects of an invention in order to constitute enablement." (See page 1005 of the decision). This means that the disclosure must adequately guide the art worker to determine, without undue experimentation. The result from in vitro experimentation cannot be extrapolated as a result in vivo. The applicant cannot rely on the knowledge of those skilled in the art to enable the claims without providing adequate teaching. Hence, considering large quantity of experimentation needed, the unpredictability of the field, the state of the art, and breadth of the claims, it is concluded that undue experimentation would be required to enable the intended claim.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. Claims 6, 34, 35, 45-46, 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Binz et al. (FR 2 718 452).

22. Binz et al. disclose a RSV G protein polypeptide comprising entire amino acid sequence between the amino acid residues 130-230 of RSV G protein of subgroup A, or subgroup B, or bovine respiratory synsytial virus, wherein the polypeptide encoded by sequences disclosed in the specification sequences SEQ ID NO: 3, 4, 8, 14, 16, 18, 30, 36, 44, 50, 52, 61 to 66, 68 and 73. The polypeptide is also characterized with two cystein residues missing at positions 173 and 186 mutations, such as SEQ ID NO: 3, 4, 14, 30, 44, 52, 61and 68 (See claims 1-4 and Sequence disclosure of SEQ ID NO. 3, 4, 14, 30, 44, 52, 61 and 68). The claimed peptides are all immunogenic that are able to induce immune response and block the RSV infection (see entire document). Therefore, the claimed invention is anticipated by the cited reference.

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

24. Claims 6, 11-13, 34, 35, 37, 39.and 43-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Binz et al. (FR 2 718 452) and Langedijk et al. (J. General Virol. 1996, Vol. 77, pp. 1249-1257).

25. Claimed invention is drawn to a synthetic peptide of amino acid residues 19-197 of RSV G protein, wherein more than one cystein residues at positions of 173 and 176 or 182 and 186 may be blocked by forming an acetamidomethyl derivatives. The said polypeptide is able to inhibit the cytopathetic effect (CPE) of RSV infection in susceptible cells, and it can be used for treatment of RSV infection and diagnosis.

26. Binz et al. disclose a RSV G protein polypeptide comprising entire amino acid sequence between the amino acid residues 130-230 of RSV G protein of subgroup A, or subgroup B, or bovine respiratory synsytial virus, wherein the polypeptide encoded by sequences disclosed in the specification sequences SEQ ID NO: 3, 4, 8, 14, 16,, 18, 30, 36, 44, 50, 52, 61 to 66, 68 and 73. The polypeptide is also characterized with two cystein residues missing at positions 173 and 186 mutations, such as SEQ ID NO: 3, 4, 14, 30, 44, 52, 61and 68 (See claims 1-4 and Sequence disclosure of SEQ ID NO. 3, 4, 14, 30, 44, 52, 61 and 68). The claimed peptides are all immunogenic that are able to induce immune response and block the RSV infection (see entire document). Binz et al. do not teach the peptide can be synthesized as acetamidomenthyl peptide or replace some of the amino acid as its D-amino acid counterpart or labeled the peptide with detectable markers.

27. Langedijlk et al. teach a method for synthesize the RSV G peptide from amino acid residues 149-197 with acetamidomenthyl derivative at the C-terminal. They also disclosed that the immunogenecity of the derived peptide possesses the same immunogenicity as the originals.

28. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was filled to be motivated by the recited references of Binz et al. in further view of the teaching by Langedjilk et al. because Binz et al. disclose the same polypeptide as it is claimed in the current application, which is the polypeptide of RSV G protein comprises the same contiguous sequence from amino acid 149-197 and the mutations in the conserved cystein residues 173 and 188. Furthermore, the amino acid at the C-terminus is modified by using ametamidomethyl amino acid as disclosed by Langedijlk et al. Binz also teach to use the claimed polypeptide for treating RSV infection as it is claimed in the instant application. Hence the claimed invention as a whole is prima facie obvious absence unexpected results.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Qun Li whose telephone number is 703-305-1695. The examiner can normally be reached on 8:00 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 703-308-4027. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Bao Qun Li
January 8, 2003

James C. Housel
JAMES HOUSEL 1/13/03
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.

Form PTO-948 (Rev. 03-02) U.S. DEPARTMENT OF COMMERCE - Patent and Trademark Office Application No. 09/202,035

NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW

The drawing(s) filed (insert date) 12/04/98 are:

A ☐ approved by the Draftsperson under 37 CFR 1.84 or 1.152.

B ☑ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 for the reasons indicated below. The Examiner will require submission of new, corrected drawings when necessary. Corrected drawing must be submitted according to the instructions on the back of this notice.

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings:
Black ink. Color.
___ Color drawings are not acceptable until petition is granted.
Fig(s) _____
___ Pencil and non-black ink not permitted. Fig(s) _____

2. PHOTOGRAPHS. 37 CFR 1.84(b)
___ Full-tone set is required. Fig(s) _____
___ Photographs may not be mounted. 37 CFR 1.84(e)
___ Poor quality (half-tone). Fig(s) _____

3. TYPE OF PAPER. 37 CFR 1.84(e)
___ Paper not flexible, strong, white, and durable.
Fig(s) _____
___ Erasures, alterations, overwritings, interlineations, folds, copy machine marks not accepted. Fig(s) _____
___ Mylar, velum paper is not acceptable (too thin).
Fig(s) _____

4. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:
___ 21.0 cm by 29.7 cm (DIN size A4)
___ 21.6 cm by 27.9 cm (8 1/2 x 11 inches)
___ All drawing sheets not the same size.
Sheet(s) _____
___ Drawings sheets not an acceptable size. Fig(s) _____

5. MARGINS. 37 CFR 1.84(g): Acceptable margins:
Top 2.5 cm Left 2.5cm Right 1.5 cm Bottom 1.0 cm
SIZE: A4 Size
Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm
SIZE: 8 1/2 x 11
Margins not acceptable. Fig(s) _____
_____ Top (T) _____ Left (L)
_____ Right (R) _____ Bottom (B)

6. VIEWS. 37 CFR 1.84(h)
REMINDER: Specification may require revision to correspond to drawing changes.
Partial views. 37 CFR 1.84(h)(2)
___ Brackets needed to show figure as one entity.
Fig(s) _____
☑ Views not labeled separately or properly.
Fig(s) 2, 4B, 4D
___ Enlarged view not labeled separately or properly.
Fig(s) _____

7. SECTIONAL VIEWS. 37 CFR 1.84 (h)(3)
___ Hatching not indicated for sectional portions of an object.
Fig(s) _____
___ Sectional designation should be noted with Arabic or Roman numbers. Fig(s) _____

8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)
___ Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) _____

9. SCALE. 37 CFR 1.84(k)
___ Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction.
Fig(s) _____

10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)
✓ Lines, numbers & letters not uniformly thick and well defined, clean, durable, and black (poor line quality).
Fig(s) 1-21

11. SHADING. 37 CFR 1.84(m)
___ Solid black areas pale. Fig(s) _____
___ Solid black shading not permitted. Fig(s) _____
___ Shade lines, pale, rough and blurred. Fig(s) _____

12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)
___ Numbers and reference characters not plain and legible.
Fig(s) _____
___ Figure legends are poor. Fig(s) _____
✓ Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(1)
Fig(s) 1, 2, 10
___ English alphabet not used. 37 CFR 1.84(p)(2)
Figs _____
___ Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3)
Fig(s) _____

13. LEAD LINES. 37 CFR 1.84(q)
___ Lead lines cross each other. Fig(s) _____
___ Lead lines missing. Fig(s) _____

14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)
___ Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Sheet(s) _____

15. NUMBERING OF VIEWS. 37 CFR 1.84(u)
___ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) _____

16. CORRECTIONS. 37 CFR 1.84(w)
___ Corrections not made from prior PTO-948 dated _____

17. DESIGN DRAWINGS. 37 CFR 1.152
___ Surface shading shown not appropriate. Fig(s) _____
___ Solid black shading not used for color contrast.
Fig(s) _____

COMMENTS

REVIEWER LAM DATE 02/25/02 TELEPHONE NO. _____

ATTACHMENT TO PAPER NO. 35

REMINDER

Drawing changes may also require changes in the specification, e.g., if Fig. 1 is changed to Fig 1A, Fig 1B, Fig. 1C, etc., the specification, at the Brief Description of the Drawing, must likewise be changed. Please make such changes by 37 CFR 1.312 amendment at the time of submitting drawings.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Drawings. 37 CFR 1.85

Corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if [illegible] application. If this information is provided, it must be [illegible] If corrected drawings are required in a [illegible] within the THREE MONTH shortened [illegible] of time may NOT be obtained under the [illegible] the mailing of a Notice of Allowability [illegible] addresses to the Official Draftsperson.

Corrections other than informalities noted [illegible] on form PTO-948.

Changes to the drawings other than [illegible] by the Draftsperson, MUST be made in the same [illegible] normally [illegible] (preferably red ink) sketch of the changes to be incorporated into the new drawings MUST be approved by the examiner before the application will be allowed. [illegible] will be required to be made [illegible] of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application.